



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:

Allen C. Buhler et al.

Attorney Docket No. BUTR-101US

Serial No. 10/646,609

Group Art Unit: 1761

Filed: August 22, 2003

Examiner: Adepeju O. Pearse

Title: LOW-CALORIE LOW-FAT BUTTER-FLAVORED  
TOPPING COMPOSITIONS AND METHODS OF PREPARATION

\* \* \* \* \*

**Declaration of Thomas A. Konar**

Thomas A. Konar declares as follows:

1. My Name is Thomas A. Konar. I am presently employed as Senior Research Scientist at ButterBuds Food Ingredients of Racine, Wisconsin (hereinafter "ButterBuds") and have held this position since June 28, 2005. From November 10, 1996 to June 10, 2005, I was employed by Givaudan Flavors as a Senior Research Scientist at their facility in Oconomowoc, Wisconsin. From November 1, 1993 until September 5, 1996 I was employed as a Laboratory Manager at Kerry Ingredients in Beloit, Wisconsin. From September 1, 1979 until October 10, 1993 I was employed as a Research Scientist at Kraft Foods, Glenview Illinois. I have a Bachelor of Science with a major in Biology from Roosevelt University in Chicago, Illinois.

2. ButterBuds is in the business of development, production and sales of food ingredients, food service and retail food items. As Senior Research Scientist for ButterBuds, I am responsible for, among other things, supervising and performing experimentation and laboratory work related to the food products manufactured and contemplated for manufacture by ButterBuds.

3. I have personal knowledge of United States Patent Application Serial Number 10/646,609 (the “Buhler application”). I am informed that the Buhler application is assigned to ButterBuds. I have carefully read the Buhler application and am familiar with its contents including the current state of the claims.

4. I have read the Office Action of September 22, 2006 issued in connection with the Buhler application. I have read, examined and analyzed the patents cited as the basis for the claim rejection(s) in the Office Action. This includes review and analysis of U.S. Patent Nos. 5,759,609 (Lynch) and 6,372,280 (Gonsalves) which are the two primary references cited in support of the claim rejections.

5. I am submitting this declaration in accordance with 37 C.F.R. §1.132 to provide evidence of the physical and chemical properties of the composition disclosed in the Lynch patent. The evidence provided herein demonstrates that the composition of the Lynch patent does not function properly when provided with a fat content in the weight percentage range claimed in the Buhler application. This evidence calls into question the validity of the claim rejections based on Lynch.

6. The premise put forward in the September 22, 2006 Office Action is that the embodiments claimed in the Buhler application are “obvious” and can be arrived at either by broadening the fat content range of Lynch or through a simple combination of Lynch and Gonsalves.

7. Several experiments were performed by me to evaluate the validity of this assumption. The purpose of the experiments was to determine whether increasing the fat content of Lynch to about 13% and 16% by weight as claimed in the Buhler application would negatively effect the Lynch composition.

8. Table 1 below lists the constituents of three sample compositions I prepared. The constituents listed in Table 1 are taken from Lynch Table 1, Example A except that the fat content of the three sample compositions respectively are 7%, 13% and 16% and the water content is reduced accordingly. (See constituents 14 and 18) All constituents in Table 1 are expressed as weight percentages.

**Table 1**

| No. | Constituent                       | Sample 1<br>7% Fat | Sample 2<br>13 % Fat | Sample 3<br>16% Fat |
|-----|-----------------------------------|--------------------|----------------------|---------------------|
| 1   | Isoclear<br>(ISOCLEAR RTM-HFCS)   | 23.00%             | 23.00%               | 23.00%              |
| 2   | Sugar                             | 0.52%              | 0.52%                | 0.52%               |
| 3   | Soy Protein                       | 0.80%              | 0.80%                | 0.80%               |
| 4   | Hydroxypropyl methyl<br>cellulose | 0.50%              | 0.50%                | 0.50%               |
| 5   | Methyl cellulose                  | 0.70%              | 0.70%                | 0.70%               |
| 6   | Xanthan Gum                       | 0.12%              | 0.12%                | 0.12%               |
| 7   | Propylene Glycol<br>Alginate      | 0.12%              | 0.12%                | 0.12%               |
| 8   | Sodium Citrate                    | 0.049%             | 0.049%               | 0.049%              |
| 9   | Sodium acid                       | 0.049%             | 0.049%               | 0.049%              |
| 10  | Sodium Chloride<br>(microfine)    | 0.058%             | 0.058%               | 0.058%              |
| 11  | Lecithin (soy)                    | 0.0875%            | 0.0875%              | 0.0875%             |
| 12  | Polysorbate 60                    | 0.1125%            | 0.1125%              | 0.1125%             |
| 13  | Polyaldol                         | 0.20%              | 0.20%                | 0.20%               |
| 14  | Water                             | 36.494%            | 30.494%              | 27.494%             |
| 15  | Corn Syrup 36DE<br>(CLEARDEX RTM) | 18.27%             | 18.27%               | 18.27%              |
| 16  | Sugar                             | 8.385%             | 8.385%               | 8.385%              |
| 17  | Dextrose                          | 2.50%              | 2.50%                | 2.50%               |
| 18  | Modified Palm Kernel Oil          | 7.00%              | 13.00%               | 16.00%              |
| 19  | Sodium Caseinate                  | 0.75%              | 0.75%                | 0.75%               |
| 20  | Disodium Phosphate                | 0.10%              | 0.10%                | 0.10%               |
| 21  | Vanilla Flavor                    | 0.185%             | 0.185%               | 0.185%              |
|     | <b>TOTAL</b>                      | 100.00%            | 100.00%              | 100.00%             |

9. On December 14, 2006, I prepared three batches of sample compositions as set forth in Table 1 (7%, 13%, 16%) according to the protocol described in Lynch at column 3, lines 12-42. I placed 14 ounces of each sample compositions in a separate steel can pressurized container with a nozzle-type valve serving as the control device regulating dispensing of the composition from each container. The containers were each charged with 10 grams of nitrous oxide at 150 psi as per the Buhler application. I then placed the three containers in a refrigerator at about 38° F and ambient pressure for 7 days.

10. Earlier, on October 10, 2006, I prepared two samples of water-based butter-flavored topping compositions according to the Buhler application, one at 13% fat content and the other at 16% fat content. The Buhler compositions were placed in steel pressurized cans and were refrigerated at about 38° F and ambient pressure as discussed in the preceding paragraph for the Lynch samples.

11. After seven days, I examined each of the 7 %, 13 % and 16 % fat Lynch compositions and made observations with respect to the physical properties of the compositions. I observed that the one-week-old refrigerated Lynch compositions stored in the pressurized containers and having fat contents of 7%, 13% and 16% all appeared to have thickened and congealed. When I operated the nozzle of the containers for these compositions, the Lynch compositions did not flow easily from the containers. Both the 13% and 16% fat compositions seemed to be stuck in the containers and dispensed slowly and irregularly from the containers, in a sputtering, spitting manner. The Lynch compositions did not form well-defined rosettes once dispensed from the containers. In fact, the rosettes appeared to be deformed. In contrast, compositions made according to the Buhler compositions at fat contents of 13% and 16% flowed quickly and easily from the containers to form well-defined rosettes with sharp, defined edges and a light, airy appearance.

12. Exhibit 1 is a photograph that I took showing the appearance of the Lynch compositions at 13% and 16% fat content after I dispensed the compositions from their containers. Exhibit 1 also includes samples of the Buhler compositions at 13% and 16% fat. The well-defined rosettes of the Buhler composition have an attractive appearance that would be very desirable in food preparation, for example. The Lynch compositions, on the other hand, are unattractive and have the appearance of deformed, jagged, irregular masses consistent with the fact that the compositions were spit out of the containers. The Lynch compositions appeared as thickened congealed masses, particularly when compared to the Buhler compositions shown in the photograph.

13. I performed an experiment concurrently with the experiment described in paragraphs 9-12 but without placing the compositions into pressurized containers. The experimental compositions were the same material as described in paragraphs 8- 9 and Table 1 as I made enough for both experiments. I put 24 ounces of each of the Lynch compositions into closed jars. These Lynch compositions (7%, 13% and 16% fat) were refrigerated (about 38° F), as described in the Lynch patent.

14. I then proceeded to whip these compositions as described in the Lynch patent by placing 650 grams each of the mixtures into a Hobart-type mixer with a whipping device at 130 rpm for 13 minutes. While all three variations allowed for the uptake of air, the total amount of air incorporated into these various compositions decreased with the increase of the fat in the composition. The whipped samples were weighed and the amount of overrun was calculated. The overrun in the 7% fat/refrigerated storage composition was about 250%, the 13% fat/refrigerated composition overrun was about 110% and the overrun in the 16% fat/refrigerated composition was about 50%. The best description of the differences here that I can come up with is that the 13% fat composition is similar to a soft warm frosting while the 16% fat composition was stiff, similar to a frosting that is cold. A graph that I prepared showing the percent overrun versus the percent fat of each Lynch composition is attached as Exhibit 2.

15. The loss of volume and/or overrun can also be seen in Exhibit 3 which is a photograph that I took showing samples of the refrigerated, non-pressurized 13 % and 16 % fat Lynch compositions after whipping. The Lynch compositions show little "volume" as would be expected of a light, airy composition having a high overrun. Each sample has defined edges providing the appearance of a thickened, stiff mass.

16. I attribute the thickened, congealed physical properties of the Lynch compositions and the adverse properties of the compositions to the increase in fat, and specifically to the use of fat contents outside the maximum fat content described in Lynch. The Lynch formulations are unsatisfactory at fat contents as high as those described in the Buhler application. Stated another way, a fat content in the range of about 13% to 16% is not compatible with Lynch and Lynch cannot be modified to have a fat content of 13% or more without having adverse effects on the Lynch composition.

17. With the greatest respect, these data rebut the Examiner's assumption that, "It would have been obvious to one of ordinary skill in the art to utilize the fat content taught by Gonsalves et al. in order to provide a low-fat content product to satisfy consumer demands for low-fat food products." as stated at page 3, paragraphs 4 and 7 of the September 22, 2006 Office Action.

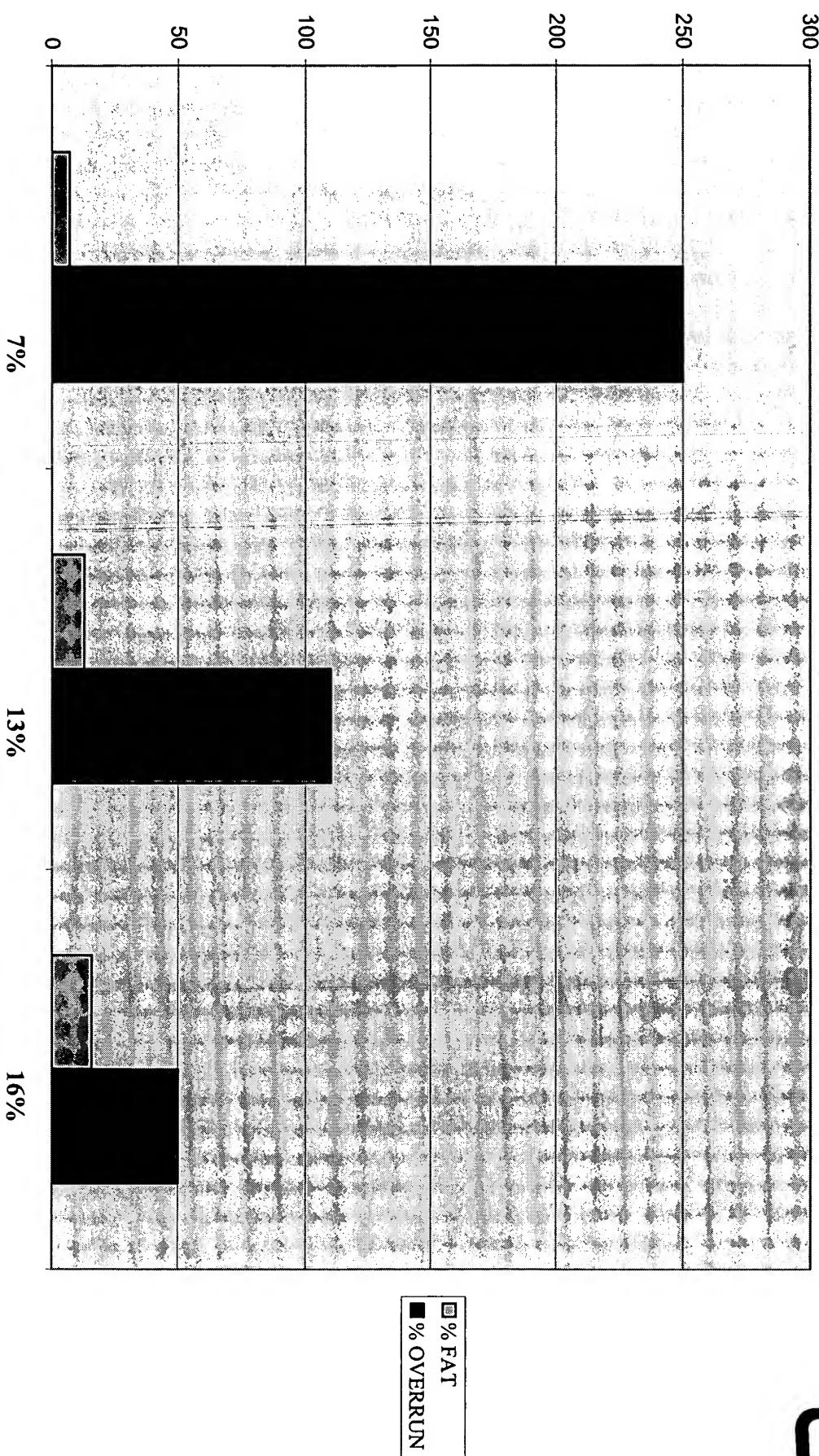
\* \* \*

I declare that: all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under § 1001 of Title 18 of the United States Code; and that willful false statements may jeopardize the validity of the application or any patent issuing thereon.

  
Thomas A. Konar

  
Date

### Effect of Increasing Fat on Overrun



BEST AVAILABLE COPY

EXHIBIT

**N**